COST AND

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The Cost Accountant and Use and Occupancy Insurance . . .

By C. Spangsberg Soe

Some Aspects of Control For the Foreman . . .

By Robert B. Wetnight

LOSS

Official Journal of

The Society of Industrial and Cost Accountants of Canada

Dec., 1955

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Cost and Management

No. 11

VOL. XXIX DECEMBER

Mr. Soe assumed his position of Insurance and Tax Accountant with the Tennessee Eastman Company in 1950, four years after first joining the company. He was born and educated in Denmark and later came to the United States. He took extension courses in Accounting and Taxation at New York University, became a Certifield Public Accountant in New York State and practised public accounting there for several years. He gained further experience during World War II as a major in the Fiscal Branch of the U.S. Army Ordnance Department. Mr. Soe is a member of the East Tennessee Chapter of the National Association of Cost Accountants and of the New York State Society of Certified Public Accountants.

Robert B. Wetnight is Associate Professor of Business Administration at Western Michigan College, Kalamazoo, Mich., and a Certified Public Accountant in Ohio. He was formerly associated with Arthur Young & Company in Toledo, Ohio. Professor Wetnight is a member of the Kalamazoo Chapter of the National Association of Cost Accountants and served on the Board of Directors for three years. He is also a member of the American Institute of Accountants and the American Accounting Association.

REGULAR DEPARTMENTS

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Christmas Message

Once again the coming of Christmas marks the end of the old year and the approach of the new. The time has come to recount the joys and sorrows of the past and to fortify ourselves for the future.

Christmas is a season of rejoicing and the birth of new hopes. Surely we have much for which to be joyful. The past year has seen the greatest easing of world tensions since the end of the war. As we glory in the unaccustomed respite from fear, we can be hopeful that "peace on earth" is not just an idle phrase and that the present prosperity will be permanent. May God give us the wisdom to keep the vision of a new world before us and the strength to make it so.

We in Canada are riding evenly upon the crest of an unparalleled expansion in our economy. Everywhere are to be seen new faces, new businesses and new developments of our resources.

Our own Society has shared in this general growth and with the loyal co-operation of our members should continue to do so, not only physically but also spiritually so that our aims and ambitions may remain worthy of the brotherhood of men.

Your Officers and Directors join me in sincerely wishing you and yours

A Very Merry Christmas and A Happy and Prosperous New Year

Charles R. MacFadden

PRESIDENT.

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C. & M. Round-Up . . .

By N. R. BARFOOT, R.I.A.

Family Allowances

The act was passed in 1944 and the first cheques mailed on July 17, 1945.

By October 1945, 1,334,000 families with 3,168,000 children were receiving payments.

In May of this year, 2,206,129 families with 5,205,290 children

received cheques.

Family allowances are payable only to children who comply with provincial school attendance regulations. In 1952 - 53, 11,800 children lost allowances for absence from school.

Employment

Here are a few figures on employment in Canada, U.S. and Great Britain:

Canadian employment in July of this year hit an all-time record of 5,588,000. This is 183,000 higher than a year ago and 103,000 above the previous peak in July 1953.

United States shows a new high of 64,000,000 employed workers. The previous high figure was in August of 1953 and was 1,300,000

less.

Employment in Great Britain reached a peace ime high of 24,000,000 late last year.

Hidden Taxes?

Everyone knows about the sales tax but did you know that 734 millions were collected last year on this account?

Here are a few examples of the amount of manufacturers' sales tax that is contained in familiar articles:

	Suggested Price	Estimated Sales Tax
Suit of clothes	\$ 75.00	\$ 4.85
Shoes	15.00	.95
Refrigerator	300.00	16.00
1 lb. of Tea	1.10	.06
26 ozs. Whiskey	4.00	.23
Automobile	2,550.00	170.00

Here is an estimate of the tax distribution by commodities:

Consumer Goods including:

Clothing	. 110	million
Furniture	. 76	million
Taxable foods		million
Alcoholic beverages	. 44	million
Tobacco		million
Medicines		million
Automobiles	72	million

Gasoline				
Miscellaneous				
TOTAL	428	million	428	million
Goods purchased by industry including machin	nery			
trucks, etc.			174	million
Equipment purchased by the Dept. of National	l De	fence	66	million
Miscellaneous				

G.N.P. - 1955

In the final month of the year, perhaps it will not be amiss to add up the score for the year.

The adjusted gross national product for the year will be 26¼ billions, at least ½ billion higher than early year productions.

Salaries and wages were 5.7% higher this year than last.

Investment income climbed 13% in the first half to end an adjusted annual rate of 4.4 billions for the year.

New residential construction showed 21% higher starts as at July 31 than a year ago and completion 24% higher. Residential construction on a per annum basis showed 120,000 new homes this year.

Agriculture showed on an adjusted annual basis, 1.4 billions compared to 1.1 billions in 1954.

Foreign trade was 10.4% higher in the final half of '55 as compared to the same period in 1954.

Government expenditures were at a rate of 4.6 billions or 7.1% higher than last year.

Pulp and Paper Facts

Here in Canada there are 3,845,744 square miles of bush or timber land.

300,000 people are engaged in the Pulp and Paper industry.

Annual business has grown from 21 mills in 1871 with 760 employees and 1 million dollar output to 130 mills in 1955 with 63,000 employees and 1,280 millions output.

Exports run to 1 billion dollars per annum.

Annual wages 379 millions, taxes 200 millions, transportation 200 millions, chemicals and supplies 101 millions, fuel and electricity 80 millions.

Average depletion of forests equals 3 billion cubic feet.

Total pulp production 10 million tons of which 2 million is exported.

It is Canada's biggest single business.

Ontario Business

Here are some comparative figures 1954-1939 about Ontario business:

	1954	1939
Population (000)	5,046	9,721,000
Personal income (\$ million)	7,418	1,766

C. & M. ROUND-UP

Rail Freight loaded (000 tons)	34,637	18,751
Power Consumption (000 KWH)23	3,819,254	9,721,000
Life Insurance Sales (\$ million)	896	157
Retail Trade (\$ million)	4,593	1,038
Construction Contracts (\$ million)	939	82
Cheques cashed (\$ million)	65,614	3,708



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actually eliminate work by showing how and when you can safely use actual costs from a prior period as a standard for comparison of actual costs for the current period . . . shows how to by-pass nearly all of the detail work in the control of material costs through variance analysis by a system of automatic checks at critical points.

It shows an easier, more effective method of labor cost control. You will see three worksaving ways to charge off burden costs. The use of industrial accounting in planning for the future is exhaustively covered with emphasis on price policy, price-making and production planning. You will also find new, simple ways you can set up cost accounting systems to facilitate internal audits.

HERE IS A PARTIAL LISTING OF THE SUBJECTS COVERED

Cost, Volume & Profit Relationships • Organization for Industrial Accounting • Cost Systems Account Classification & Cost Ledgers • The Accountation of Cost Data • Controlling Overhead Costs • Building Standards • Standard Costs in the Accounts • Design & Administration of Business Systems • Machines for Accounting • Form Design & Control • Forecasting & Planning • Inventory Values & Profit Measurement • The Meaning & Methods of Control • Pricing Policies • Internal Check & Audit • Cost Reports & Analysis of Results Material Control Procedures • Labor Accounting

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Books in Review . . .

CASES IN COST ACCOUNTING

By Clarence L. Van Sickle, Professor of Accounting, University of Pittsburgh, Prentice-Hall, 1955, \$4.75, p. 422.

Reviewed by Dr. MICHAEL ALBERY,
Professor of Finance and Economics,
Boston College.

Teachers of Cost Accounting have long felt the need for a text book containing a series of cases taken from actual business practice. By preparing his book, Professor Van Sickle has certainly helped instructors in their endeavours to educate cost accountants rather than cost bookkeepers or cost theorists.

In developing his topics, Professor Van Sickle has started with cases on production and finished with research. Specifically, the titles of the eight chapters are:

- I Production Costs in Relation to General Accounting
- II Manufacturing Cost Systems: Actual Costs and Normal Costs
- III Standard Manufacturing Cost System
- IV Marketing and Non-Manufacturing Cost Systems
 - V General Budgetary Control for Overall Income, Cost, Expense, and Profit Control
- VI Profit Planning

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- VII Production Costs in Relation to Federal Income Taxes
- VIII Research Approach to Study of Cost and Other Accounting Factors

In total, 42 cases are presented. Each one of the cases ends with "case considerations". These considerations are thought-provoking questions, related not only to cost but also to administrative and management problems. The author has thus followed a good method for stressing the pertinent points of each case.

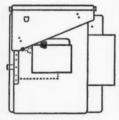
The book can be used as a source of supplementary assignments in a full year's course on Cost Accounting. It could also be used to great advantage as a text for an advanced course of Cost Control or Cost Analysis.

The cases have been well chosen and the book well organized. The teachers of Cost Accounting owe a debt of gratitude to Professor Van Sickle for having placed at their disposal a valuable pedagogic tool, which was not available until now.

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YOUR
COMPLETE
PAYROLL
WHEN
YOU WRITE
YOUR
CHEQUE

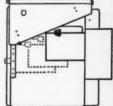


POSITION 1: Write name on small, neat new cheque. Name is duplicated on journal underneath.



PRESS TABULATING KEY— CHEQUE MOVES TO:

POSITION 2: Write earnings on cheque. Earnings are copied on journal and earnings record in same line as name.



PRESS TABULATING KEY— CHEQUE MOVES TO:

POSITION 3: Write deductions and net pay on cheque. Figures are copied on tojournal and earnings record in same line as earnings.

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The Cost Accountant and Use and Occupancy Insurance . . .

By C. Spangsberg Soe,

Insurance and Tax Accountant, Tennessee Eastman Company Division of Eastman Kodak Company, Kingsport, Tennessee.

A case study of the cost accountant's important role in Use and Occupancy insurance from the placing of the coverage through settlement of the claim. The importance of continuous review of the coverage to reflect fluctuations in business is stressed, and some of the problems in connection with the settlement of a claim are explained.

HEN a fire destroys or damages a manufacturing plant, the loss is by no means confined to the physical value of the buildings, machinery, equipment, and inventories destroyed. On the contrary, the interruption of production, which is caused by the fire, will often result in loss of profits and in operating expenses that continue after the fire, which may exceed the actual physical damage incurred. Statistics show that a large percentage of small manufacturing concerns never resume operations after an interruption caused by fire.

To protect themselves against these losses, most manufacturing concerns now carry business interruption insurance, often also referred to as "Use and Occupancy" or "prospective earnings" insurance. This insurance, if properly written, can do for the insured what he could have done for himself had no fire occurred, and it should place him in the same financial position he would have been in if there had been no interruption of production. In actual practice there will generally be some expenses or loss of profits which are not covered, but if the policy is properly written, the proper amount of coverage carried, and the claim accurately prepared, substantial recovery can be made.

In no other type of insurance is the cost accountant's role so important as it is in business interruption coverage; the required insurance coverage for property damage can be determined by engineering appraisals, liability coverage is a matter of judgment in determining exposures, but the proper coverage for business interruption can only be determined with the aid of accounting methods. This is probably the reason why so many insurance men look upon this type of insurance as something cryptic or mysterious; as one prominent insurance

manager has stated it:

"Cases of apoplexy, domestic infidelity, alcoholism, gray hair, and ulcers among insurance managers can be attributed directly to the study of U & O insurance."

Close co-operation between the insurance manager and the cost accountant takes the mystery out of U & O insurance, and the required coverage and incurred losses can be computed by accounting methods as accurately, if not more so, as the actual cash value of property destroyed by fire can be determined by appraisals.

Two-item Contribution Form

There are several types of U & O policies, but the form most commonly used by manufacturing concerns is the two-item actual loss sustained form written with a 100% or 80% co-insurance clause. If the probable loss due to interruption by the hazards insured-against equals profits and continuing expenses for a full year, the policy should be written with a 100% co-insurance clause to obtain the highest maximum face value. Under this form of policy, coverage is as follows:

Item I covers "the net profits which are not being earned due to the interruption and such charges and expenses, including payroll expenses of officers, executives, department managers, employees under contract, and other important employees, as must necessarily continue during the interruption of business, to the extent only that such charges and expenses would have been earned had no loss occurred. This item also covers expenses of necessary heat, light and power, the cost of which is prevented from being earned due to the interruption of business."

Item II covers "the entire ordinary payroll expenses for a stated period of time immediately following the date of damage, but only to the extent necessary to assume the normal business with the same quality of service which existed immediately preceding the loss and which would have been earned had no loss occurred."

The ordinary payroll expenses include unemployment taxes as well as compensation insurance and other contributions based upon the payroll. The entire payroll must be insured for the specific period, but it should be noted that the liability of the insurance company terminates at the moment the physical damage is restored and does not, as many believe, continue until production is started after restoration of the damaged property. The insured is vitally interested in this coverage because in order to get the operations started promptly after the restoration of the physical damage, he must have on hand the full complement of both factory and office workers. If a shutdown is necessary, the ordinary payroll expenses are only recoverable to the extent that they are necessary in order to retain the skilled labour required to operate the plant when operations are restored, notwithstanding the fact that premiums have been paid on the entire payroll. However, in a small town where employment cannot be obtained temporarily elsewhere, it might be necessary to meet the payroll in full during the period of shutdown since, otherwise, the employees might move to other towns to secure employment, in which case they probably could not be brought back when the plant is restored. Within reason, the insured can use his own judgment on payroll expenses, but the adjuster has a right to demand evidence that the money paid for payroll is used solely for the purpose of retaining necessary help.

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THE COST ACCOUNTANT AND USE AND OCCUPANCY INSURANCE

An Example: How to Insure

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For purposes of illustrating how to compute U & O values and how to prepare a U & O claim, let us look at Sample Manufacturing Company, which owns two plants, Plant A, where raw materials are produced, and Plant B in another city, where the finished products are manufactured. The entire output of Plant A is used by Plant B, but Plant B also purchases raw materials from outside sources. At the end of 1953, the management decided to provide complete U & O insurance coverage for the two plants, so that losses at both plants due to interruption caused by fire at one of the plants would be covered; since a high percentage of skilled labour is used in manufacturing processes, the management also decided to provide ordinary payroll coverage for a period of 90 days. The insurance manager, with the assistance of production personnel, made a study of the potential exposures, and it was determined that it would be highly improbable for an interruption at one of the plants to close down production in both plants for a period of a year. Based on this study, the insurance manager started negotiations for coverage for both plants under a blanket two-item policy with an 80% co-insurance clause.

Preliminary Study

Early in January 1954, the insurance manager requested the cost accountant to prepare an estimate of the 1954 profits and continuing expenses and of the ordinary payroll for the highest consecutive 90-day period during 1954 in accordance with the printed worksheet furnished by the insurance company. The insurance manager explained to the cost accountant that in order to comply with the co-insurance clause of the policy, Item I must represent 80% of the annual net profits and the annual amount of all charges and expenses of any nature, whether continuing or not (except the insured's entire ordinary payroll and except the expenses of heat, light and power to the extent that such expenses do not continue under contract) that would have been earned, had no loss occurred, during the 12 months immediately following the date of damage to or destruction of the insured property. Item II must represent 80% of the entire ordinary payroll expenses for the period of 90 days immediately following the date of damage to or destruction of the property.

Using the worksheet supplied by the insurance company as a guide, the accountant prepared the estimated U & O values shown as Exhibit A.

Statement of U & O Values

Actual 1953 Estimated 1954
Plant A Plant B Plant A Plant B
In Thousands of Dollars

Item I

D. J				
Deduct: Cost of raw materials and supplies Ordinary payroll (including insurance	1,000	8,200	1,100	9,800
and taxes on payroll)	3,450	5,800	3,750	7,000
contract expense	50	100	50	100
	\$ 4,500	\$14,100	\$ 4,900	\$16,900
Item I	\$ 1,500	\$ 5,900	\$ 1,600	\$ 7,100
Item II Ordinary payroll for 90 days	\$ 900	\$ 1,600	\$ 950	\$ 1,800

EXHIBIT A

PLACING OF COVERAGE AND SUBSEQUENT REVIEW

On the basis of this estimate, the insurance manager placed the U & O coverage as of January 1, 1954, as follows:

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	\$1,600,000 \$7,100,000	rounded to rounded to	\$1,300,000 5,700,000
	\$8,700,000		\$7,000,000
	\$ 950,000 \$1,800,000		\$ 760,000 1,440,000
	\$2,750,000		\$2,200,000

After the coverage was placed, the insurance manager requested the cost accountant to review the required coverage after each semi-annual closing and discuss any required changes in the coverage. The first review was made on July 20, 1954, at which time the cost accountant told the insurance manager that although sales were down to some extent, it was expected that manufacturing costs at Plant A would be reduced due to the installation of new equipment and that sales would pick up again so that the profits would be about as estimated for the year 1954. Basing his decision on this information, the insurance manager continued the present U & O coverage without change.

Interruption by Fire and Resumption of Production

On December 3, 1954, a fire broke out in Plant A destroying the shipping department and part of the manufacturing plant. Production was completely stopped for two days and full production was not resumed until December 13. Plant B was forced to stop production three days after the fire due to lack of raw materials and did not resume operations for three days; full production was not resumed until December 15. All of the employees of Plant A were put to work repairing the damage caused by the fire, and, in addition, a crew of mechanics were sent from Plant B to Plant A to assist in repairing the production equipment. A temporary shipping dock and shipping facilities were erected at Plant A and improvised manufacturing equip-

THE COST ACCOUNTANT AND USE AND OCCUPANCY INSURANCE

ment was set up; considerable overtime was worked in order to resume production at the earliest possible moment. At Plant B raw materials similar to those produced by Plant A were purchased from outside sources in order to get back into production. However, these raw materials were not only higher priced than those supplied by Plant A, but they required additional fabrication and handling.

Conditions Immediately Prior to the Fire

The installation of new equipment at Plant A was completed during the month of September and resulted in a reduction of labour costs of about 10%. During the period of installation and continuing through the month of October, production was curtailed to some extent, so that raw material inventories at Plant B were at a very low level. During November considerable overtime was worked at Plant A, increasing the production by approximately 20%, in order to restore the inventories of raw materials at Plant B to normal level. The sales at Plant B showed an increase for the months of September, October and November, and indications were that the increase in sales would continue for another 10 months.

Accumulation of U & O Losses

Immediately after the fire, job orders were set up in the accounting departments at both Plant A and Plant B to accumulate all the costs incurred in connection with the fire; separate job orders were provided for property damage, U & O Item I losses, U & O Item II losses, and U & O extra expenses. A U & O value statement (Exhibit B) was also prepared for the 11 months ended December 30, 1954, for both plants as a guide in determining the U & O loss. The statements are shown as Exhibit B.

ACTUAL.	TI &	0	VALUES	1.1	TO	11.30.54

		Plant B
Item I		
Sales—less discounts, returns, allowances, prepaid freight Deduct:	\$ 5,900	\$22,000
Raw materials and supplies Ordinary payroll Heat, light, and power in excess of contract	1,000 3,350	8,920 6,490
expense	\$ 4,400	\$15,500
Item I	\$ 1,500	\$ 6,500
Item II — Ordinary payroll	\$ 850	\$ 1,600

EXHIBIT B

Based on these figures, computations were made to show that the co-insurance clause was complied with as follows:

Item I-Eleven months ended November 30, 1954,	
per Exhibit B — Plants A and B	\$8,000,000
Annualized	
80% Coverage required	\$6,981,817
Coverage carried	\$7,000,000

Determination of Loss of Sales

The job orders covering the damage caused by the fire were closed early in January, after which the cost accountant and the insurance manager discussed the preparation of the claims; it was decided to prepare a tentative statement of the losses incurred and then call the adjuster in for a conference before the final preparation of the claims. It was agreed that the most equitable basis for computing the loss of sales would be as follows:

Sales at Plant B totaled \$22,000,000 for the 11 months ended November 30; however, an anlysis of the sales by month showed that for the first 8 months the sales had averaged \$1,960,000, while the sales for September, October and November averaged \$2,100,000 per month. An examination of orders on hand and forecasts prepared by the sales department indicated that this higher average could be maintained for at least the next 10 months. On this basis, the sales for December, had no interruption occurred, were estimated at \$2,100,000; the actual sales were \$1,700,000, and the loss of sales at Plant B was, therefore, assumed to be \$400,000. The sales at Plant A totaled \$5,900,000 for the first 11 months of 1954; the sales for the month of November totaled \$660,000. since during that month production was stepped up by 20% to restore the inventories at Plant B which were below normal due to the lower production at Plant A while the new production equipment was being installed. Based on delivery schedules from Plant B, it was estimated that the sales at Plant A would be \$550,000 per month at least for the next 10 months, and December sales were, therefore, estimated at \$550,000; the actual sales totaled \$440,000 and the loss of sales was, therefore, assumed to be \$110,000.

Based on this discussion, schedules of incurred losses as shown on Exhibit C were prepared by the cost accountant, in accordance with which the U & O losses at Plant A were \$43,700 and the U & O losses at Plant B were \$176,500.

TENTATIVE STATEMENT OF LOSSES INCURRED

	Plant A	Plant B
Property Damage		
Finished goods, work in process	\$ 20,000	
Materials and supplies to repair equipment	3,000	
Labour — own employees plus 50% burden	7,500	
Labour — Plant B employees plus 40% burden	2,100	
Overtime premium	1,400	
Transportation and living expenses —		
Plant B employees	1,000	
Total Property Damage	\$ 35,000	
U & O Loss — Item I Loss of Sales	\$110,000	\$400,000
Loss of Dates	\$110,000	\$400,000

THE COST ACCOUNTANT AND USE AND OCCUPANCY INSURANCE

Deduct: Cost of raw materials	\$ 16,500	\$160,000
Ordinary payroll	* 10,000	4100,000
(including insurance and taxes) Heat, light and power	56,500 500	120,000 1,000
	73,500	281,000
Loss Loss of profit on finished goods destroyed Heat, light and power — continuing	36,500 2,000 200	119,000 500
Total Item I	\$ 38,700	\$119,500
U & O Loss — Item II Ordinary payroll (including insurance and taxes)		\$ 50,000
U & O Extra Expenses		
Temporary shipping facilities Additional material handling Rental of equipment Extra labour required to fabricate	\$ 2,500 2,000 500	1,000
purchased raw materials		1,000
Excess cost of raw materials purchased		5,000
	5,000	7,000
Total U & O Loss	\$ 43,700	\$176,500

EXHIBIT C

First Conference with Adjuster

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The insurance adjuster was then called in to discuss the tentative statement of the loss incurred. (Although this article deals with U & O only, it is necessary to include a review of the property damage claim to illustrate its relationship to the U & O claim.) The adjuster first reviewed the proposed claim for property damage and said that since the mechanics at Plant B were sent to Plant A for the sole purpose of assisting in the repair of production equipment so that production could be resumed at the earliest possible moment, transportation and living expenses paid these employees should be charged to U & O extra expenses rather than to the property damage claim. Similarly, all overtime premiums which were paid in order to speed up the repair of production facilities should be added as extra expenses rather than as property damage.

Item I of the U & O losses was next discussed and the computations of the loss of sales were explained to the insurance adjuster, who agreed with the method and results obtained.

The adjuster said that no reimbursement could be allowed for loss of profits on finished goods since the U & O policy covers only losses caused by interruption of business; if the company decides to insure against loss of profits on finished materials, this can be done by insuring finished goods at the selling price under the property damage policy.

The adjuster claimed that since all continuing expenses for Plant A and Plant B were being reimbursed under Item I, the burden charged on the employees' labour under the property damage claim should be

deducted from Item I of the U & O claim. After considerable discussion with the insurance manager and the cost accountant this point was conceded and Item I was reduced by \$2,500 for Plant A and \$600 for Plant B.

The adjuster further said that the continuing expenses reimbursed under Item I should be reduced by the amount of depreciation applicable to buildings and equipment destroyed by the fire; the cost accountant agreed with the principle but explained that the amount involved was insignificant. The adjuster then agreed to disregard this item.

The adjuster next requested a list of the employees who had received payments chargeable to Item II and noted that all the employees who had lost time due to the interruption had received their full wages. The adjuster felt that payments should have been made only to skilled and white collar labour who could not easily be replaced, but the insurance manager insisted that the entire payroll should be paid since a high degree of skill was required of all the employees; after much discussion the adjuster conceded this point.

The adjuster then asked the cost accountant to prepare revised schedules reflecting the adjustments made, after which he suggested another conference to discuss the extra expenses and the co-insurance provisions. The revised statement of losses, shown as Exhibit D, was prepared and discussed with the insurance manager.

FINAL STATEMENT OF LOSSES INCURRED

Finished goods, work in process Materials and supplies to repair equipment Labour — Plant A and Plant B employees Burden — Plant A employees Burden — Plant B employees	Plant A \$ 20,000 3,000 6,500 2,500 600	Plant B
Total Property Damage	\$ 32,600	
U & O Loss — Item I Loss of Sales	\$110,000	\$400,000
Deduct: Cost of raw materials Ordinary payroll Heat, light and power Burden charged to property damage	\$ 16,500 56,500 500 2,500	\$160,000 120,000 1,000 600
	76,000	281,600
Heat, light and power — continuing	34,000 200	118,400 500
Total Item I U & O Loss — Item II — Ordinary Payroll	\$ 34,200	\$118,900 50,000
U & O — Extra Expenses Temporary shipping facilities Additional material handling Rental of equipment Extra labour — raw materials purchased	\$ 2,500 2,000 500	1,000

THE COST ACCOUNTANT AND USE AND OCCUPANCY INSURANCE

Excess cost of purchased raw materials		5,000
Overtime premium	1,400	•,•••
Transportation and living expenses —	7 000	
Plant B employees	1,000	
Total Extra Expenses	7,400	7,000
Total U & O Loss	\$ 41,600	\$175,900

EXHIBIT D

Second Conference with the Adjuster — Co-insurance

The adjuster was called in again for another conference and was shown the revised statements prepared by the cost accountant; the computations showing compliance with the co-insurance clause were also shown to him. The adjuster called their attention to the fact that U & O values are not based on the current year but on the period of one year beginning immediately following the date of fire, giving consideration to the experience of the business before the fire and the probable experience thereafter had no fire occurrd. Since, in determining the loss of sales caused by the fire, the monthly sales for each of the next ten months were estimated at \$550,000 for Plant A and \$2,100,000 for Plant B, the adjuster said these estimates and applicable expenses should be used in determining compliance with the co-insurance clause. The cost accountant then prepared the following statement:

Item I	12/3/54 Plant A	& O Values - 12/3/55 Plant B ousands
Sales	\$ 6,600	\$25,200
Deduct: Cost of raw materials Ordinary payroll Heat, light and power	\$ 1,050 3,375 75	\$10,000 7,100 100
	\$ 4,500	\$17,200
Item I	\$ 2,100	\$ 8,000
Item II	\$ 850	\$ 1,850
EVUIDIT E	-	

In accordance with this statement, the coverage carried should have been 80% of \$10,100,000, or \$8,080,000, for Item I, and 80% of \$2,700,000, or \$2,160,000 for Item II. The coverage carried for Item II was \$2,200,000, so full recovery could be made under this item; however, the coverage for Item I was only \$7,000,000, so that on the claim for Item I only \$7,000,000/8,080,000, or 86.63%, of the claim could be recovered.

Since the extra expenses incurred in order to resume production as early as possible are only recoverable to the extent that the losses have been reduced, the adjuster next asked how much time had been saved

due to these extra expenditures. He was told that the production people had estimated that at least one day's production had been gained at each plant, and since the extra expenses charged for each plant were less than one day's U & O value, the extra expenses were allowed in full.

THE FINAL SETTLEMENT

After this conference with the adjuster the final claim was prepared for a total of \$197,030 as follows:

Item I—86.63% of \$ 34,200	Plant A \$ 29.627	Plant B
-86.63% of \$118,900	V =>,0=.	\$103,003 50,000
Item II Extra Expenses	7,400	7,000
	\$ 37,027	\$160,003

Conclusion

In the case illustrated in this article, insufficient attention to the fluctuations of the business and failure to follow the provisions of the policy with respect to the co-insurance clause cost the company over \$20,000. It cannot be too highly emphasized that full protection under the U & O policy is not assured unless constant attention is paid to the adjustments of the coverage as changes occur in the business; the policy of reviewing the coverage only at January 1st and July 1st can be very costly.

Further, it is also most important to follow the provisions of the policy in computing the required coverage for U & O insurance. The erroneous practice of computing the amount of coverage on the basis of a listing of all continuing expenses does not comply with the provisions of the average policy; there are many expenses which, although they will usually be non-continuing, must nevertheless be included in the U & O values for co-insurance purposes. It should be remembered that the premiums are based on a reporting of U & O values at sales less raw materials, ordinary payroll, and heat, light, and power, and that the co-insurance clause will be invoked unless the values reported equal the stated percentage of these values where large claims are involved.

FOR FURTHER READING

THE USE OF STANDARD COSTS IN BUSINESS INTERRUPTION INSURANCE, by Kenneth E. Pettijohn, Cost and Management, January 1955.

BUSINESS INTERRUPTION INSURANCE, by George F. Burne, The London and Lancashire Group (from lectures to the Insurance Institute of Ontario).

BUSINESS INTERRUPTION PROBLEMS IN COMPANY OPERATIONS TODAY, by Frank L. Erion, American Manufacturing Association, Insurance Series No. 91. SETTLING A BUSINESS INTERRUPTION LOSS, by Alf. T. Perrson, American

Manufacturing Association, Insurance Series No. 99.

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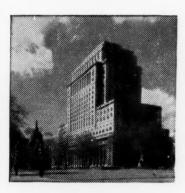
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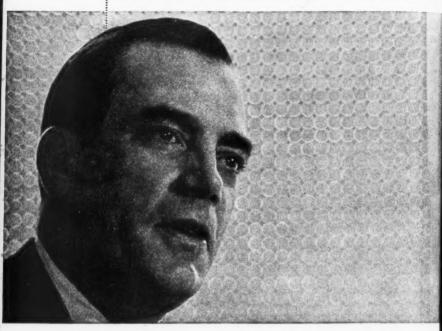
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Some Aspects of Control for the Foreman . . .

BY ROBERT B. WETNIGHT,
Associate Professor of Business Administration,
Western Michigan College, Kalamazoo, Mich.

The author examines some of the aspects of control in general and its specific application to the manufacturing department. He then evolves two reports for the foreman to be used in the analysis of variances between actual and standard performance.

66 CONTROL is the examination of results. To control is to make sure that all operations at all times are carried out in accordance with the plan adopted, with the orders given and with the principles laid down. Control compares, discusses and criticises; it tends to stimulate planning; to simplify and strengthen the organization; to increase the efficiency of command; and to facilitate organization."

All activities of a business are subject to control in varying degrees and in varying manners, as the above definition implies. Sales performance must be controlled as well as expenses. Quality must be controlled as well as sales. The same is true of all the functions within the business.

Davis has listed three objectives to control. The first is an assurance of correct performance as specified by the plan of action. The second is a well-coordinated action. The third is a minimum of losses due to interference with the proper execution of the plan. The first two steps are positive factors and the third is negative.

Characteristics of Control

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It would be well to examine the characteristics and steps of control advocated by several authorities. One of the most important points, on which all are in agreement, is that the first essential to control is a knowledge of the facts.

Thurston has listed four basic principles of control. These are:

- 1. Determination of the objectives.
- Establishment of policies, procedures and methods of what, who, where, how, when, and why an objective is to be reached.
- 3. Set standards.
- 4. Appraisal.

When compared with some other author's ideas, these principles seem to be incomplete. They only emphasize the comparison phase of control and not the corrective phase.

Richard Rudduck writing for the Farm Bureau Insurance Companies and J. M. Juran writing in *The Management Review* have both listed seven steps to control which are similar. These steps are as follows:

- 1. Selection of the activities. This involves a selection of those activities of the company to be controlled. This would take into account both the relative importance of the function to the business as a whole and also the degree of fluctuation which might occur from the basic plan without control. More will be said later on the proper selection of control points.
- 2. Definition of the units of measurement. Although it may be obvious to the reader, dollars are not the only units which may be used effectively. In fact, in some cases, dollars are impossible to use, and in others they are impractical to use because they do not carry sufficient impact on the persons involved. In some companies it has been found best to use a physical unit budget rather than one in dollars. Number of items involved, pounds, feet, gallons, and literally hundreds of other units may be used. Measurability is a prime requisite of unit selection.
- 3. Reporting system for measuring and summarizing actual performance. Before control can be anything more than a nebulous concept, the manager must have developed an accurate system for gathering the facts and summarizing them in an intelligent manner. This fact-gathering must be timely to enable the manager to take the necessary corrective action. An accurate reporting system is one phase of a control installation that requires much time and effort to develop. Accountants have devoted much of their time to this problem.
- 4. Selection and review of standards. Standards will be discussed at greater length later on. However, it might be well to define a standard at this point. Standards are the pre-planned methods or results of performance.
- 5. Analysis and interpretation of variances. Selection of standards would be a meaningless thing if there were not methods by which they were compared to the actual performance and the variances determined. Mere determination of the variance amount is only of historical interest, and even in that light, not of much value. There must be an interpretation as to why performance was not the same as the planned standard. Whether performance was better or worse is not important at this point. The causes are what must be determined. The effects are merely interesting, the causes are of value in future planning. "During action control" and "after action control" are both impossible without knowing why performance varied from standard.
- 6. Decision on action to be taken. Here is the heart of all control. After knowing all the facts, the manager must determine what action to take in the light of these facts. Established policies, principles, and the manager's judgment and experience help determine the proper action.
- 7. Follow-up action. No control programme is complete without a systematical method of following up the action taken to see if it resulted in the effect that was intended. There are two major reasons why this

SOME ASPECTS OF CONTROL FOR THE FOREMAN

step must be performed. First, unless a new look is taken, the operation might still be out of control and require immediate additional corrective action. The second reason is that knowledge of the results of his action in the face of the facts in a given case will enable the manager to learn what action was proper and what action was not. This might seem like a trial and error method of learning, but it is the only true way the manager can learn what will work for him. Since there is a continuous follow-up procedure, it loses most of the disadvantages of trial and error.

A concept which is closely related to the one discussed above emphasizes the continuous nature of control. For want of a better name, it is called Closed Loop Control. Closed Loop Control has seven steps. They are as follows:

- 1. Where are we now? This requires an appraisal of the facts on actual performance.
- 2. Where will be be if no action is taken? Inasmuch as business is a dynamic thing, no operation will remain in the same place by itself. It is either getting better or poorer; more profitable or less; quicker or slower; higher or lower in quality. The direction in which we are going will determine the type of corrective action necessary.
- 3. Where do we want to be? What are our plans and goals for this function? This involves setting objectives and then subsequently the proper standards. It might be argued that this step should be first, since most authorities feel that the point of departure should be the organization's objectives. This is only partially true, since objectives can be set only in relation to the present position of the organization.
- 4. What is the difference between where we will be without action and where we want to be? Here we measure the variances and begin the interpretation phase of our control.
- 5. How do we get there? The decision is made as to what action will be correct in light of the circumstances.
- 6. Take action. We now shift into a positive position. Up to this point our control system has been asking us questions concerning operations. Now we are ready to answer it.
- 7. Start at Step No. 1 and repeat the cycle. This is the most important part of the plan. Control is a continuous thing. It cannot be shut off and on as the spirit moves the manager. The speed with which the loop is closed will depend upon the relative importance of the item in question. In some cases it might be hourly or daily. In others, monthly may be frequent enough. This might result in a continuation of the original plan as established in Step No. 3 or in its revision as a result of new conditions found in Steps Nos. 1 and 2 as the loop starts its second arc. This concept will result in a spiral which narrows in diameter as control becomes more effective.

Socio-Psychological Effects of Control

Since control by its definition assumes that people are being controlled as well as machines, it seems important to see how people react to controls and to the people administering and/or servicing the control devices.

Like many staff officers, control staff personnel quite frequently feel that theirs is the most important function in the entire organization. They can point to the troubles that the company had before they were given the responsibilities and authorities that they now have. This may be all true, but they must also remember that all functions are important. Without one the organization cannot run as efficiently as it can with them all. They feel that their control devices are means of finding errors and making things better. They feel that because of their activities, improvements are made quickly. This is a result of carrying the knowledge of variances directly to the top. (A practice which defeats the whole cooperative scheme of the organization and only serves to satisfy the egotistic nature of the staff.) Control people say that their techniques are the means to apply pressure on those below. They also feel that they provide a goal or motivating force for the operating departments.

On the other side of the fence, the people whose activities are being controlled have just as positive feelings about the matter. For one thing, since control devices are relatively complicated, and are the means of measuring performance against standards which the workers had little or nothing to say in establishing, foremen feel that they cannot discuss these control devices with their men. They object, and rightly so, to the fact that most reports show results and not underlying reasons. There is too much emphasis on past performance. They object to goals which are either inflexible or that are just the reverse, namely increasingly difficult to reach. They feel that budgets don't motivate. And finally, they feel that only the total picture is shown, and its true perspective cannot be seen without examining the multitude of variables making up the whole.

Obviously the staff and the line are on opposite sides of the same fence in this matter. The fact that they are, does not mean that they must be so. Therefore, let us look at some methods for eliminating the points of dispute.

1. Teach the use and importance of control devices. This involves the education of personnel all the way from the front line machine operator to the company president. Explain why the device has been developed. (The thought given to this one point might be all that is necessary to throw out the device or to modify it.) Discuss its means of construction and how it operates. Point out what it tells; and what it does not tell. This must all be done in a language which can be understood by the audience to which the teaching is aimed.

SOME ASPECTS OF CONTROL FOR THE FOREMAN

- 2. Acquaint the various groups with each other's problems. Nothing brings about harmony sooner than an understanding of the problems facing associated groups.
- 3. Reduce the absolute faith in control tools. It must be pointed out that they are merely the means to the end and not the end itself. The staff is most apt to make this error. A fancy-appearing control report is the most tangible evidence of the successful efforts of the control staff. However, they should realize that the real evidence of their accomplishments lies in the fact that there are no variances to explain. This is perfect control. On the surface it makes the operating department look good. In actuality, it makes both departments look good. This point must be burned into the minds of the staff.
- 4. Teach each group the fundamentals of human relations. They must recognize the principle of individual differences. A machine can be adjusted by turning a handle and thus brought back into control. However, the operator must be motivated to turn the handle correctly or else control cannot be obtained. The control staff must know and appreciate why an operator reacts in the way that he does, or else all the analysis of variances in the world will not bring the machine into control. The operator must want to do it.
- 5. Finally, but far from least, remove the philosophy of downward pressure. A fundamental law of physics states that when pressure is exerted on one point of an object, its force is carried through to either move the object or bounce back. This is true of downward pressure from the staff. It either results in resentful compliance or else bounces back in the form of upward pressure. This can take the form of slowdowns, sloppy work, or the formation of groups to absorb the pressure. As a result, cliques are formed which may well turn out to become These groups are developed to counteract the pressure from the top. A more effective way of accomplishing the same results without any of the pressure from the top is to create a climate of confidence in the organization's objectives. Once this confidence has been established, the major personnel battle has been won. A mutuality of interests will exist, and control will then cease to be a personal thing looking for someone on which to hang the blame, and will become an impersonal thing which has the task of pointing out places for improvement. We must remember that our objective is to isolate and correct the cause of unfavorable results, not to find the blame.

These socio-psychological needs of the workers must be met before control can be effective. If they are not, we have compliance through fear rather than through the desire to reach a common objective.

In discussing the accountant's role in control, Anderson has developed a four-point theory of control through cooperative effort. Its basic application can be made to almost any function in addition to the accounting function. It is:

- 1. The accountant must establish an active and sympathetic working relationship with the operating executives who can use the information, advice and assistance which he can offer.
 - 2. The accountant must remember that he is a staff officer.
- 3. Forced imposition of controls on an unwilling executive will effect little improvement in the substance of a situation. The operating executive's view-point must be changed so he will cooperate whole-heartedly to make the controls function and to use them in running his job.
- 4. The accountant can develop cooperative effort if he assumes a professional view-point.

What to Control

One of the first steps which has been mentioned in effecting proper control has been the selection of the correct items or activities to be controlled. The importance of this statement can be seen in the following illustration presented at a meeting of quality control specialists in Chicago recently.

"One company had built its quality standards around product appearance. If color was a little off, a batch would be rejected. On the basis of appearance, the quality standards were eventually met. Quality was in full control. But the whole programme was a waste of effort, because the company's customers weren't worried about color. They were shipping the product back to the manufacturer, or weren't buying at all, because it had an offensive odor." There had been no attempt to determine what were important variables in the manufacture of the product which would cause trouble. The same situation can be brought to almost any other phase of the company's business. Incorrect selection of control points will present apparent evidence of perfect control, but the practical effect will be the same as though there were no control at all. This also points up another factor, that control for control's sake is not what is desired.

Juran makes reference to the Pareto Curve. This seems to answer the selection problem as clearly as any other statement that has been made. In essence, it states that "in any series of elements to be controlled, a selected small fraction, in terms of numbers of elements, always accounts for a large fraction in terms of effect." This means that all items of variables need not be controlled and the company will still have its operations in practical and effective control. It therefore follows that one elaborate (if necessary) system of control can be devised for the "Vital Few" and a less complex system (or none at all) can be devised for the "Trivial Many". If this principle is examined more fully, it will be seen that not only can we place our control emphasis on the variables which account for the greatest amount of effect, but that we can also narrow down the area of control to those items in the

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"Vital Few" which represent true variables. An illustration may be in order at this point. Using the Pareto Theory, we can see that raw material cost and direct labour represent the greatest portion of the items of variable cost. However, by further examination we can see (and this would be true in certain industries) that the quantity or dollar value of the material in the final product does not vary to any degree from period to period. In other words, although material cost is an important part of total variable cost, in this case it represents an item which is fixed per unit of product and does not fluctuate from the standard to any degree. Thus it can be eliminated from our control considerations. (Inasmuch as control is a continuing thing and selection is not a "one shot" thing, if and when material cost does become a variable in this sense it would be proper and necessary to include it among the items controlled.)

Another point to be kept in mind when selecting the activities to be controlled is the degree of control that can be exercised internally after the item has been isolated. The item must be of such a nature that the accounting system, or any other reporting system involved, will be able to report it in such a manner that will truly represent an area of accountability. If the item cannot be isolated to one person's responsibility, it cannot be effectively controlled.

Earlier in this paper, it was said that standards are the pre-planned methods or results of performance. These standards can relate to several measurables. Standards can be developed for quality. They can be developed for quantity such as production schedules or sales quotas. Standards can represent expenditures such as standard costs. And finally, they can be established for time, such as schedules to be met.

For whatever measurable the standard has been selected, we can find at least three distinct ways in which the standard can be determined. These are past performance, bogey standards, and a scientific approach.

There is little to say in favor of past performance as a means of setting standards. It is a method in which the records of the past periods become the data to be used in establishing the standards of the future. Thus, if a particular department has historically spent \$500 for indirect labour for each \$1,000 of direct labour, past performance will say that the standard of indirect labour should be 50% of direct labour dollars. Whether the \$500 was proper or not is considered unimportant.

There have been some points made in favor of this method. One is that past performance is an improvement over nothing. This may not be true. It may be better to be uninformed and realize that condition than to be misinformed and rely on the erroneous data. Past performance borrows the dignity of the term "standard" to apply to errors of the past. Proper investigation may find that the past has been better than has been expected, or much worse. Usually the latter

is what is found. By clothing vesterday's poor operations in the garb of what is expected, we are merely fooling ourselves. It has also been pointed out that past performance as a means of setting standards directs attention to the problem of the work under consideration. This is true. It has the same faults that will be seen in the use of bogey standards. Also it is stated that this type of standard is easily understood and thus better accepted. This would be especially true in situations where past performance has been of such a nature that none of the persons involved has had to extend himself very much and wants to continue in the same rut that he is in now. Thus if any new standard is introduced, there will be the natural reaction against change and the unknown, with the desire to stay with the known. This belief is hard to accept. One point made has to be agreed with. That is that past performance may be the only basis to use when a more scientific method cannot be used. However, I want to temper this statement with the feeling that past performance used in this manner should only be used as a starting point. The classification of data must be examined to see that all the periods under review are classified in the same manner. Comparisons to other variables should be made to prove the relationships finally agreed upon.

The second manner of setting standards is the use of bogey standards. Bogeys are reference points selected at random and used to measure the comparative variations from the point involved. There is no attempt to state that the bogey is the desired performance. Rather it is used to compare actual performance of several periods. This is no real standard of performance at all. Its use will be more apt to confuse the people involved than to aid them. It is not to be recommended at all.

The last, and most desirable approach to establishing standards is a scientific approach. Here the various components of the activity are broken down into logical elements. Then sub-standards are set for each of the various elements. The sub-standards are then put together into one standard for the entire activity. This utilizes the advantages of the scientific method.

Standards can be set at any one of three main levels. These are the ideal level, an attainable level, and the expected level. The selection of the proper level is important in determining what the standards should be. It must first be recognized that performance is possible at any of the three levels. The ideal would be the one that scientific investigation says is possible if all extraneous factors are fixed. This is not usually possible, although it may be desirable. So, we must temper the ideal down to an attainable standard. This is one which can be reached with the equipment and personnel that we have and in their present condition. Even below this we find the actual performance expected will not reach this attainable standard. This may

SOME ASPECTS OF CONTROL FOR THE FOREMAN

be true for many reasons. Among them will be the fact that enough time has not elapsed to allow for the proper absorption of the new concepts developed in arriving at the methods of operation. The employees react to change slowly. They must be given a chance to absorb new methods slowly. Another reason is that certain variables may be more out of line for the short run than during the long run. In setting the standard, they might have to be taken into account, but only in the average effect that they would have on performance. An example could be found in the food processing industry. A poor crop could cause high spoilage. The problem is then one of planning for this either in the standard or in the variance.

Features of Control Programmes

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We have said that our control programme should have developed methods by which we could report actual performance and measure it against our standards. The variances that would be obtained would be analyzed for their causes. This would give us the necessary facts for a proper decision on the action to be taken. The following list from Controllership by J. B. Heckert represents some principles of good report preparation for internal reports to management:

1. Reports should contain only essential facts.

2. Reports should be simple and clear.

3. Reports should be expressed in language and in terms familiar to the individual who will use them.

4. Information should be presented in a logical sequence.

5. Reports should be accurate.

6. Reports should reveal significant trends and relationships.

7. The form of presentation should be suited to the individual who will use it.

8. Reports should be timely.

- 9. Reports should be either self-explanatory or interpreted.
- 10. In general, the principles of exception should be followed.

11. Reports should be standardized whenever possible.

12. Report design should reflect the view-point of the user.

13. Reports should be useful.

15. The care taken in preparing a report should be commensurate

 Cost of the report should be considered. with its use.

It will be noted that in the above list it was mentioned that reports should be timely. The frequency of reports is important. To effect control properly, certain data should be reported daily or even hourly. This is true of activities or items which are constantly varying. Other data are required less frequently but systematically, such as monthly profit and loss statements for the entire company. Other data may be required only occasionally. In this category fall data concerning labour fringe benefits, capital asset replacement data, etc.

Recommended Control Reports

After exploring the various backgrounds of the problem of control reports and techniques as they apply generally, and as they apply specifically to the manufacturing department, let us develop two reports to be used by the department foreman as a means of comparing the actual performance and the standard performance of his area and analyzing the variances. The first report will be a weekly one and the second will be issued monthly.

There have been a few basic assumptions made about the company. First, there is in operation a standard cost system which has been scientifically determined and is based upon attainable standards. In connection with the cost system, there is in operation a flexible budget system. This is built around direct labour dollars as a measure of variability of production. There is one further consideration which must be assumed. This, like the two previously mentioned, is logical and natural in many companies. It is that the various data used in the control reports are collected from their various sources by one central agency. This does not necessarily imply a central control agency, but does require a control reporting agency.

The weekly report is broken down into eight separate sections. The first four have to do with the utilization and effectiveness of labour supervision. The next two have to do with the use of supplies and equipment. The next section contains an abbreviated plan for the next week. The last section contains explanations of the significant variances.

The timing is such that the report should be in the hands of the foreman no later than Monday morning. This means that, as the workweek ends on Friday afternoon, the clerical staffs accumulating the data for the report must be able to get the report out by the end of the day, or on Saturday. This cuts things quite fine. However, much of the work can be accumulating as the week goes along. Secondly, it must be remembered that the data does not have to be 100% correct to be of value. It is much better to get the report out 97% correct on Monday morning than to wait until Wednesday and have it 100% correct.

One further point on the distribution of the report. It should be submitted to the foreman involved before it goes to anyone else. If he has any additions or corrections to the explanations of the variances, he should have the opportunity to make them before the report is sent to his superiors. This would eliminate the control staff's sending data over the head of the person being controlled and would tend to create a more favorable relationship between the two groups.

Since labour is one of the most common variables, it is given a place of prominence in the report. The comparison of actual direct labour against standard direct labour enables the foreman to see how well he has been utilizing the workers assigned to him. This can be

SOME ASPECTS OF CONTROL FOR THE FOREMAN

shown by using direct labour dollars, or, if there is a significant variation between labour rates and the foreman is placed in the position of choosing which employee to use for a specific task, it would be better to show both the variation from standard of labour time and of labour rates.

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The selection of the specific elements of indirect labour, such as overtime and downtime, has been made on the basis of the controllability and the foreman's accountability. There are a number of causes of loss of production on a machine. These may be assigned to various areas of responsibility such as sales, foreman, personnel, quality control, purchasing, tool making, and maintenance. It is important to show here only the causes of variance over which the foreman can exercise some control. The other causes are very important, but their inclusion in this report would only tend to confuse the issue and provide an unnecessary loop-hole through which a poor foreman could crawl.

The sections pertaining to employee attendance and grievances are included to point out the effectiveness of the foreman in creating a favorable climate in which to work. Studies have shown that an employee's attitude toward attendance bears a direct relationship to the foreman's ability to properly supervise his men. Efficient foremen usually have departments in which the absence rate is low. Grievances have been included because they represent the embryo of more serious trouble to come. Good foremanship will settle grievances at the departmental level before they have a chance to become company-wide problems. Thus a foreman's ability to handle these problems before they become too large is a good test of how well he has his department under control.

The section involved with the controllable supplies uses the Theory of Pareto Curve in selecting the items to be reported. Only those items which have an important bearing on the total outcome are included. Also, those over which the foreman can exercise no control are eliminated. This is a departure from the normal report sent to the foreman. Most accounting reports attempt to develop the entire departmental profit and loss statement. All of the allocations necessary for full product costing are included in the common report. This means that many items of expense are shown over which the foreman neither needs to exercise any control nor can exercise control. As a result, the report is cluttered up with a mass of unnecessary data which only tends to cloud the real items.

The production data show how well the foreman has succeeded in meeting the various standards set for him in getting the product out. A comparison of planned production against the actual shows the final results of his efforts. Any variation may be explained by a number of reasons, many of which are the summation of the explanations for the items above. This approach eliminates the reporting of a departmental

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burden rate. It does however, show how well the foreman has used the physical facilities that have been provided him. Since one of the uses of a burden rate by the foreman is to measure how well he is using facilities provided, this does the same thing and does it in a language that he can understand.

The use of material is indicated by the scrap incurred as compared with the total production. If yield of material is important, it can be shown here in the same manner.

The section concerning plans for the next week is included to give the foreman a "bird's-eye-view" of what is to come. He will be able to plan his work more effectively if he has some advanced knowledge of what to expect. Also, he will be in a better position to keep his workers informed.

The remarks section is used to explain all significant variances from standard. As pointed out earlier, the foreman should be consulted for his viewpoint on these. Thus we not only have a report to him, but also one from him.

The monthly report is divided into four sections. Each of these covers items of information necessary for proper corrective action on the part of the foreman. The first section deals with indicators of the efficiency of the supervisor in handling the people under his responsibility. The second points up his use of the equipment and supplies made available to his people so that they can turn out the work required. The third section reports on production efficiency. The last section is reserved for non-recurring data which will help the foreman do his job better.

The data on the efficiency of direct labour are the same as on the weekly report. Direct labour and labour standards are usually items which are easily understood by the foreman and his men.

Labour turn-over provides a guidepost to the foreman concerning his ability to keep good workers in his department. Comparative data of rates of turn-over are shown for actual and standard for both the department involved and for the entire plant. This enables the foreman to compare his performance to standards and determine the necessary action. The use of performance data for the entire plant helps point out the effect of external or common conditions which might influence the department's performance.

The data concerning absenteeism rates and grievances have been commented on earlier. On the report, the information is converted to monthly figures.

The items of average hourly earnings and average hours worked are to keep the foreman informed about the items of economic interest to his men. This is of special value during periods of extremely high or of extremely low activity. At these times the workers are more "pay-

SOME ASPECTS OF CONTROL FOR THE FOREMAN

cheque" conscious. It is helpful to the foreman to know in advance the answers to questions his men may be asking.

The section on machine utilization is the same as the weekly report. As pointed out earlier, when machine time is a significant factor in the production process, this type of data is more significant than is an overhead rate. Assuming that the amount of overhead remains the same, these data measure the effectiveness of the usage of the overhead items provided.

Repair costs are indicative of several things. First, they point out the relative age and condition of the equipment. This phase is beyond the control of the foreman. Secondly, they point out whether the equipment is getting proper usage. The division of costs incurred into preventative and curative should indicate whether the foreman is taking proper care of his equipment. This will eliminate the opportunity to make a good showing as compared with the budget by not having certain preventative repair work done. This omitted repair work will show up later in the form of a large curative repair job.

The section on supplies is similar to the one on the weekly report. The usage of these supplies need not be reported in dollars. In some cases, it would prove more effective to report the standard and actual consumption in terms of physical units involved. This would drive home the meaning of the variances.

The realization of the production schedules are the same data as shown on the weekly report. It is used to point out the effectiveness of the foreman in meeting production schedules. Since proper scheduling is only as good as the company's ability to comply with the plans, this becomes a good measure of the foreman's ability to carry his part of the company schedule.

Scrap and spoilage measure the efficiency with which the men in the department are working. The distinction is made between scrap, which is the excess material left over after the product is made, and spoilage, which is the damaged product after production has begun. There is usually a predetermined amount of scrap. Therefore its control is mainly directed at holding the amount incurred within those bounds. However spoilage should not occur. Some will occur unless control is perfect. The amount of spoilage should be watched carefully. This becomes increasingly important when the proportion of labour and overhead costs on the product are high. The material may be recoverable, but these costs are not.

Inspection costs are determined by two factors. The first is the susceptibility of the product to be produced in a faulty manner. The second is the degree with which the operators are watching the quality standards which have been set by the company. Since the maintenance of high quality is the responsibility of the foreman, it has been shown here.

The special section is to be used for reporting items of current interest which do not warrant continuous inclusion in the body of the report. This would include special studies on safety, cost reduction, employee participation in benefit programmes, the results of the suggestion system, analyses of the various classifications of employees, and a host of other items. This section can also be used from time-to-time to briefly tell the foreman what the company's long-range plans are, and how the company is progressing toward these goals.

The final selection of the items to appear in either of the reports would depend upon particular aspects of the company involved. Some of the items which have been used in the sample reports would have no place in many company's reports. Other items have been left off which would have an important place. Even within the same company there might be proper variation in the data required by the several departments.

Those items which have been used have been selected on the basis of the principle of the "Vital Few". It will be noted that these reports differ from the conventional reports given to foremen. Much accounting data has been eliminated on the premise that it would be of no help. However, data from the personnel department and the production department have been included because they were essential. We have in effect one report on all the necessary facts the foreman needs to know about his performance, rather than having each department do some empire building by submitting its own report.

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In summary let it be said that the foreman must be given the most important information to allow him to preperly appraise his actions. This information must be of such a nature that he will be able to take the proper corrective action on his own initiative. When this has been done, the foreman will truly become a member of the management team.

FOREMAN'S WEEKLY REPORT

FOREMAN'S W	VEEKL	KEPOKI	
Department			Week Ending
1. Direct Labour			
a. Actual Direct Labour Cost -			
b. Standard Direct Labour Cost -			***********
c. Per Cent of Realization			
2. Indirect Labour		Total	% of Std. D.L.
a. Overtime Premium			
b. Down Time · · ·			
c. Other Indirect Labour			
3. Employee Attendance		Total	% of Total Hrs.
a. Time lost-tardy · · ·	-		
b. Time lost—absent · · ·	•		**********
4. Grievances			
a. No. carried over from last week			
b. New	-		
c. Settled · · · ·			
d. Referred to Grievance Committe	e		
e. No. carried over to next week -			

SOME ASPECTS OF CONTROL FOR THE FOREMAN

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5.	Controllable Supplies		Stan	dar	d		A	ctual		Variance
	a. Tools									
	b. Cutting Oils - c. Grinding Wheels -									
,	•									
0.	Production Data a. Quantity of output		Sche	edul	е		A	ctuai		Variance
	b. Machine utilization									
	c. Labour utilization									
	d. Scrap as a per cent of	f cor	nplet	ed 1	produ	ectio	n			
7.	Plans for next week a. Planned production b. Expected labour cha	anges								
8.	Remarks and explanations									
					• • • • •					
	FOR		NIC		AITU	II V	DED	DOT		
	FORE	MA	N 2	MU	NIL	LI	KEP	JKI		
										Month of
De	epartment									doum of
	partimont	I	EMP	LOY	EE	DAT	^r A			
1.	Direct Labour									
	a. Actual Direct Labour	Cos	ts	-				-	•	
	b. Standard Direct Labour c. Per Cent of Realiza	our C	osts	•	-	-			-	
	c. Per Cent of Realiza	tion		-		•			•	
2.	T 3 / 173 - 173 -						Dep	artme	ent	Plant
	a. This month -		-							
	a. This month b. Year to date c. Standard	•	•	-	•					
	c. Standard			•	•					**********
3.	Absenteeism Rate						Depa	rtme	nt	Plant
	a. This month		•	•						
	b. Year to date	•	•		•					
	c. Standard · ·	•	•		•					
4.	Grievances									
	a. No. carried over from						•	•		
	b. New · · ·	•	•		-	-	•	•		
	d Referred to Grievano	e Co	mmit	tee						
	e. No. Carried over to r	ext 1	nont	h						
	c. Settled d. Referred to Grievance e. No. Carried over to 1 1. Old 2. New									
	2. New -									
5.	Average Hourly Earnings									
	a. This month .									
	a. This month b. Last month c. This month last year		-	-	-			-		
	c. This month last year							•		
6.	Average Hours Worked									
	a. This month -	-			-			-		
	a. This month - b. Last month -			•	•					
	c. This month last year			•	•		•		•	
	II E	OUIP	MEN	T A	ND	MA	TERI	ALS		
1.	Machine utilization									
	a. Per schedule -		•					-		
				•	•				•	
	c. Per cent of schedule	reali	zed		-		•	•	•	

2.	Repair cost									
	a. Budget allowance b. Actual		٠	•		•		•		
	1. Preventative				-					
	2. Curative									
	3. Total -				-					
	c. Variance			•	-	•	•	•	-	
3.	Supplies		Sta	ndar	d		A	tual		Variance
	a. Tools									
	b. Cutting Oils -									
	c. Grinding Wheels			* * * *						
		Ш	PRO	DUC	TION	D	ATA			
1.	Realization of production	sche	dule							
	a. Output per schedule	3			•			-	-	
	b. Actual output -			•		•		-	-	
	c. Variance				•	-		•	-	***********
2.	Scraps as per cent of ma	terial	cost	8	-		-	-	•	
3.	Spoilage as a per cent of	total	cost	8 -			•			
4.	Inspection Costs									
	a. Actual costs -									
	b. Standard									
	c. Variance							•		
			IV	SP	ECIA	L				
1.	Report of items of various	us na	tures	whi	ch are	e of	curre	ent i	nteres	t.
			\mathbf{v}	REN	AARK	S				

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FOR FURTHER READING

CLARIFYING THE STATUS OF THE FOREMAN, By Earle E. Longeland, American Management Association Manufacturing Series No. 213.

MAINTAINING CLOSE COMMUNICATION WITH THE FOREMAN, By William
M. Day, American Management Association Manufacturing Series No. 213.
HELPING THE FOREMAN CONTROL COSTS, By R. E. Stockmeyer N.A.C.A.

Bulletin, February, 1954.

COST CONTROL FACTS FOR THE FOREMAN, By B. Powell and F. Mancheski, N.A.C.A. Bulletin May, 1953.

Obituary

W. H. McKINNON

With deepest regret, the Society notes the death of W. H. McKinnon, R.I.A., a former Charter Member and Past President of the Edmonton Chapter. Mr. McKinnon, who was Secretary-Treasurer of the Standard Iron Works, died in Edmonton on November 12th at the age of 46.

He was a tireless and devoted member and his loss is keenly felt by the Society and the Edmonton Chapter.

The Society extends its heartfelt sympathy to Mr. McKinnon's family.

Student Section . . .

ACCOUNTING II

QUESTION III (14 marks)

Jones and Smith formed a partnership at 1st January, 1954. They each invested cash of \$25,000 and \$15,000 respectively and agreed to share profits and losses equally after providing for (1) interest at 5% per annum on their original capital contributions and (2) salary for Jones of \$4,000 and Smith \$3,000 per annum respectively.

During the year merchandise was acquired at a cost of \$60,000 invoices of \$6,500 remained unpaid at 31st December. Operating expenses paid amounted to \$29,500. Credit sales for the year totalled \$85,000 which are exactly double the cost of merchandise sold. Collections from customers were \$73,500 and the balance is believed fully collectible. During the year furniture and fixtures were acquired at a cost of \$8,500. Depreciation of this asset for 1954 was calculated at \$850.

At the end of the year accrued expenses and salaries total \$550. Prepaid expenses consisting of insurance and supplies inventories total \$400. Partners' salaries have not been paid, but Jones and Smith have made drawings of \$4,000 and \$1,500 respectively during the year.

REQUIRED:

- (a) Prepare a statement of partners' capital accounts for the year ended 31st December, 1954.
- (b) Prepare a balance sheet as at 31st December, 1954, for the Jones and Smith Partnership.

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(a) Jones and Smith
Statement of Partners' Capital Accounts
for the year ended December 31st, 1954

Original Investment Less: Drawings	Jones \$ 25,000 4,000	Smith \$ 15,000 1,500	Total \$ 40,000 5,500
Balance	21,000	13,500	34,500
Division of Profit			
Salaries	4,000	3,000	7,000
Interest	1,250	750	2,000
Balance	1,500	1,500	3,000
	6,750	5,250	12,000
Balance of Capital	\$ 27,750	\$ 18,750	\$ 46,500

(b) Jones and Smith

Balance Sheet
as at 31st December, 1954

Asset

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Assets	
Current Assets	
Cash	\$16,500
Accounts Receivable	11,500
Merchandise Inventory	17,500
Prepaid Expenses	400
Fixed Assets	
Furniture	\$45,900
Less: Accumulated Depreciation 850	7,650
_	\$53,550
Equities	
Current Liabilities	
Accounts Payable	6,500
Accrued Liabilities	550
	7,050
Capital	
Jones\$27,750	
Smith	44.000
	46,500
	\$53,550

COMMENT

An average of 11 marks out of a total of 14 was obtained on this question by the students who attempted the question. Only 4 students out of a total of 352 failed to attempt the question.

The major error in the solutions presented to this question was in the failure on the part of the student to take into consideration the Prepaid Expenses and Accrued Liabilities as well as the Accumulated Depreciation as at the 31st of December, 1954.

In certain instances the student failed to indicate that the profit of the partnership represented the amount prior to consideration of any payments to the partners. Where the student included Interest and Salaries as an operating expense in the correct amounts, the penalty imposed was slight.

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